

CLAIMS

1. Pharmaceutical compositions having a stimulating effect on the proliferation of NK cells, comprising an effective amount of at least an antibody selected in the group comprising an anti-NCR antibody such as anti-NKp30 antibody or anti-NKp46 antibody, or both, or an immuno-reactive fragment thereof, and a cytokine selected in the group comprising interleukins such as IL2, IL12, IL15, IL21 or a combination thereof, in association with a pharmaceutically acceptable carrier, said antibody(ies) and cytokine(s) being administered together or separately to a subject.
2. The pharmaceutical compositions of claim 1, wherein said anti-NKp30 antibody and/or anti-NKp46 antibody are used in admixture with IL2.
3. The pharmaceutical compositions of claim 1, wherein said anti-NKp30 antibodies are isolated antibodies or antigen binding fragment thereof which specifically bind to a polypeptide selected from the group consisting of SEQ ID N°1, SEQ ID N°2, SEQ ID N°3, SEQ ID N°4, or an immunogenic fragment thereof, and SEQ ID N°5.
4. The pharmaceutical compositions of claim 3, wherein said antibodies specifically bind to polypeptide having SEQ ID N°1.
5. The pharmaceutical compositions of claim 1, wherein said anti-NKp30 and/or anti-NKp46 antibodies are monoclonal antibodies, affinity, chimerized or humanized antibodies and more preferably humanized mouse monoclonal antibodies or of human origin.
6. The pharmaceutical compositions of claim 5, wherein said anti-NKp30 monoclonal antibody is produced by hybridoma strain I-2576.

7. The pharmaceutical compositions of claim 1, comprising antibody fragments, said fragments being essentially Fab, F(ab')₂, and Fv fragments and CDR grafted humanized monoclonal antibodies.
- 5 8. The pharmaceutical compositions of claim 1, which are administered by various routes, including intradermal, intramuscular, intraperitoneal, intravenous, or subcutaneous injection, intranasal route and the surgical route.
- 10 9. The pharmaceutical compositions of claim 1, which are under the form of tablet, powder, pastes, patches, granules, microgranules, nanoparticles, colloid solution, aqueous solution, injectable solutions, sprays, liposomes.
- 15 10. The pharmaceutical compositions of claim 1, when used for daily subcutaneous injection, comprising from 1 ng to 100mg/kg (body weight) of antibodies, and lower than 1 million units/square meters/day of cytokine(s), for prevention, palliation, therapy e.g. of melanoma, Chronic Myeloid Leukemia, Acute Myeloid Leukemia, Lymphomas, Multiple Myeloma, hepatocarcinoma, lung adenocarcinoma, Neuroblastoma and for anti-microbial
- 20 prevention, palliation and therapy.
11. A method for stimulating the proliferation of NK cells which comprises contacting NK cells with an effective amount of a pharmaceutical composition according to claim 1.
- 25 12. A method according to claim 11 comprising one or several injections of an effective amount of at least an antibody selected in the group comprising an anti-NCR antibody such as anti-NKp30 antibody or anti-NKp46 antibody, or both, or an immuno-reactive fragment thereof, and, repeated injections of a
- 30 cytokine selected in the group comprising interleukins such as IL2, IL12, IL15,

IL21 or a combination thereof, during 5-10 days, said cytokine(s) being first injected on the same day as the first injection of antibodies.

13. The method of claim 12, comprising one or two injections/day of cytokine(s)
5 by subcutaneous route.

14. The method of claim 11, wherein said interleukine is IL-2 and is injected subcutaneously at daily doses below 1 million units/m² for 5 to 10 days.

10 15. The use of the pharmaceutical compositions of claim 1 in the manufacture of a drug for prevention, palliation, therapy e.g., of melanoma, Chronic Myeloid Leukemia, Acute Myeloid Leukemia, Lymphomas, Multiple Myeloma, hepatocarcinoma, lung adenocarcinoma, Neuroblastoma and for anti-microbial prevention, palliation and therapy.

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